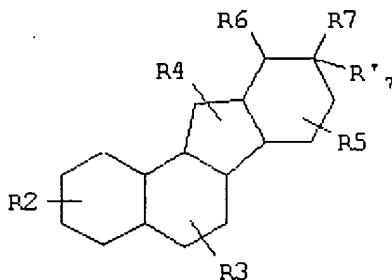


In the claims:

For the convenience of the Examiner, all claims being examined, whether or not amended, are presented below.

1. (Cancelled)
2. (Cancelled)
3. (Previously presented) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to a patient a composition comprising a purified steroidal alkaloid represented in the general formulas (I), or unsaturated forms thereof and/or seco-, nor- or homo-derivatives thereof:



Formula I

wherein, as valence permits,

R₂, R₃, R₄, and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

R₆, R₇, and R'₇ are absent or represent, independently for each occurrence, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls,

carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$, or

R_6 and R_7 , or R_7 and R'_7 , taken together form a ring or polycyclic ring;

with the proviso that at least one of R_6 , R_7 , or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

m is an integer in the range 0 to 8 inclusive.

4. (Withdrawn) The method of claim 3, wherein:

R_2 and R_3 , for each occurrence, is an -OH, alkyl, -O-alkyl, -C(O)-alkyl, or -C(O)- R_8 ;

R_4 , for each occurrence, is ~~an~~ absent, or represents -OH, =O, alkyl, -O-alkyl, -C(O)-alkyl, or -C(O)- R_8 ;

R_6 , R_7 , and R'_7 each independently represent, hydrogen, alkyls, alkenyls, alkynyls, amines, imines, amides, carbonyls, carboxyls, carboxamides, ethers, thioethers, esters, or $-(CH_2)_m-R_8$, or

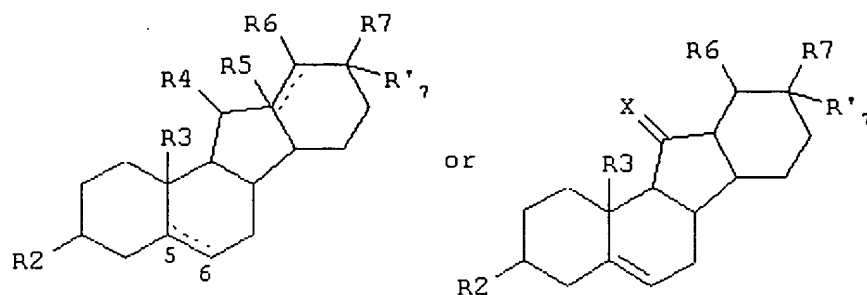
R_7 , and R'_7 taken together form a furanopiperidine, such as perhydrofuro[3,2-b]pyridine, a pyranopiperidine, a quinoline, an indole, a pyranopyrrole, a naphthyridine, a thiofuranopiperidine, or a thiopyranopiperidine

with the proviso that at least one of R_6 , R_7 , or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle, and preferably R_8 is a piperidine, pyrimidine, morpholine, thiomorpholine, pyridazine,

5. (Previously presented) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to a patient a composition comprising a purified

steroidal alkaloid represented in the general formula (II), or unsaturated forms thereof and/or seco-, nor- or homo-derivatives thereof:



Formula II

wherein

F1 cont.
 R_2 and R_4 , independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_3 , and R_5 , independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6 , R_7 , and R'_7 are absent or represent, independently, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$, or

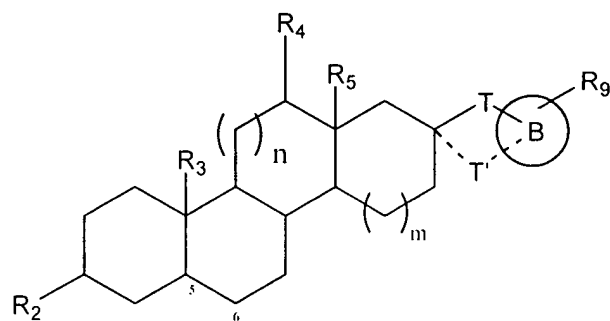
R_6 and R_7 , or R_7 and R'_7 , taken together form a ring or polycyclic ring, with the proviso that at least one of R_6 , R_7 , or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

m is an integer in the range 0 to 8 inclusive; and

X represents O or S.

6. (Previously presented) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified alkaloid represented in the general formula (III), or unsaturated forms thereof and/or seco-, nor- or homo-derivatives thereof:



Formula III

wherein

R₂ and R₄ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

R₃ and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

R₈ represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

B represents monocyclic or polycyclic groups;

T represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-10 bond lengths;

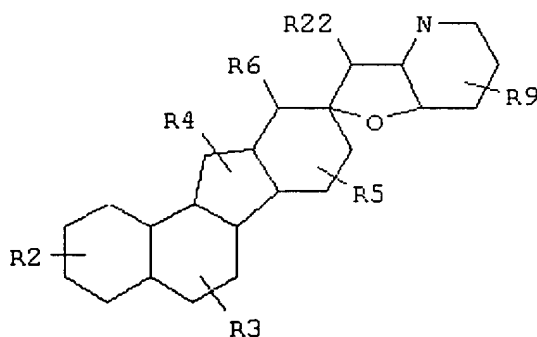
T' is absent, or represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-3 bond lengths, wherein if T and T' are present together, then T and T' taken together with the ring B form a covalently closed ring of 5-8 ring atoms;

R₉ represent one or more substitutions to the ring B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and

n and m are, independently, zero, 1 or 2;

with the proviso that T, T' B and R₉, taken together include at least one primary or secondary amine.

7. (Previously presented) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified steroidal alkaloid represented in the general formula (IV), or unsaturated forms thereof and/or seco-, nor- or homo-derivatives thereof:



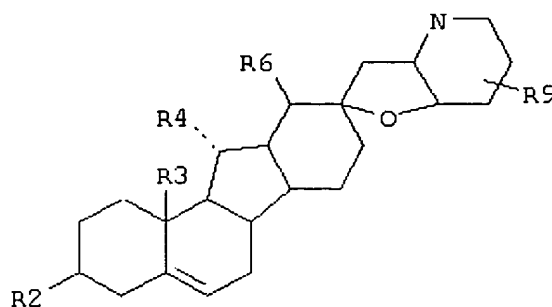
Formula IV

wherein

R₂, R₃, R₄, and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates,

phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;
 R_6 is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, $=O$, $=S$, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;
 R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;
 R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, $=O$, $=S$, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and
 R_{22} is absent or represents an alkyl, an alkoxyl or $-OH$.

8. (Previously presented) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified steroidal alkaloid represented in the general formula (V) or unsaturated forms thereof and/or seco-, nór- or homo-derivatives thereof:



Formula V

wherein

R_2 and R_4 independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, $=O$, $=S$, alkoxyl, silyloxy,

amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_3 independently for each occurrence, represents one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6 is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, $=O$, $=S$, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, $=O$, $=S$, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$.

9 & 10. (Cancelled)

11. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid does not substantially interfere with the biological activity of such steroids as aldosterone, androstane, androstene, androstenedione, androsterone, cholecalciferol, cholestane, cholic acid, corticosterone, cortisol, cortisol acetate, cortisone, cortisone acetate, deoxycorticosterone, digitoxigenin, ergocalciferol, ergosterol, estradiol-17- α , estradiol-17- β , estriol, estrane, estrone, hydrocortisone, lanosterol, lithocholic acid, mestranol, β -methasone, prednisone, pregnane, pregnenolone, progesterone, spironolactone, testosterone, or triamcinolone.

12. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid does not specifically bind a nuclear hormone receptor.

13. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid does not specifically bind estrogen or testosterone receptors.

14. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid has no estrogenic activity at therapeutic concentrations.

15. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED₅₀ of 1 mM or less.

16. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED₅₀ of 1 μM or less.

Fi
cont. 17. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED₅₀ of 1 nM or less.

18 & 19. (Cancelled)

20. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid is administered as part of a therapeutic or cosmetic application.

21. (Cancelled)

22. (Previously presented) The method of any of claims 3-8, wherein the steroidal alkaloid is applied as a topical formulation.

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

Fi
cont.

26. (Cancelled)
